



DEBRIS MANAGEMENT



Debris Operations & Debris Management Site Operations

Rick Carleski, Assistant Chief
Ohio EPA/DMWM



OHIO EPA ACTIONS FOR DEBRIS MANAGEMENT



Ohio EPA director has authority to:

1. Exempt disaster debris from disposal fees pursuant to ORC 3745.012 (B)(2)
 - if the governor declares a state of emergency.
 - fee waiver can include state disposal fees and Solid Waste Management District (SWMD) disposal fees and SWMD generation fees
 - Recent examples: Dayton area (June – October 2019); Mercer county (June – July 2019)
2. Increase a landfill AMDWR (Authorized Maximum Daily Waste Receipt) to temporarily accept more daily debris, per OAC 3745-501-75(B)
 - Landfill must send request to Ohio EPA, w/cc to SWMD and HD



FEE WAIVER PROCESS



- **Governor issues emergency declaration**
- **Ohio EPA/SWMD in contact to discuss fee waiver**
- **SWMD submits to Ohio EPA a request/concurrence to waive local fees**
- **Ohio EPA director issues Director's Final Findings and Orders (DFFO) outlining fees and duration of the waiver**
- **Landfills log disaster debris quantities received on daily logs**



DEBRIS MANAGEMENT SITE - WHAT IS IT?



Facility to:

- Temporarily store
 - Segregate, and/or
 - Reduce debris for recycling and final disposal
-
- At times called Temporary Debris Storage and Reduction Site (TDSR)





DEBRIS MANAGEMENT SITE - CONSIDERATIONS



• Advantages

- Flexible uses
- Minimizes impacts to existing landfills
- Reduces time for removal and disposal of debris
- May help reduce disposal costs

• Disadvantages

- Expensive
- Requires detailed planning/permitting
- Many potential historic and environmental requirements
- Requires dedicated site management



ASSESSING THE NEED FOR A DMS



- Projected or estimated amount of debris
- Amount going directly to landfill
- Location of debris
- Mix of debris (vegetative, C&D, HHW)
- Priority of debris removal
- Speed of reduction
- Capability of existing facilities



DEBRIS MANAGEMENT SITES - PLANNING



- Investigate and evaluate prior to disaster
- Maintain current list of potential sites
- Update on a periodic basis
- After disaster, assess the need to use your planned site



SITE SELECTION: TEAM



- **Appropriate local agencies**
- **Appropriate State agencies**
- **Local officials**
- **Be interdisciplinary**
- **Coordinate with:**
 - **Local residents**
 - **Conservation and environmental groups**
 - **State Historic Preservation Office**



DMS SITE SELECTION CRITERIA:



- **Ownership – private or public?**
- **Site size & location**
 - Is it big enough for the planned use?
 - Is it in an environmentally or historically/culturally significant area?
 - Are there neighborhood concerns with dust, noise, traffic?
 - Good ingress/egress points



DMS SITE SELECTION CRITERIA:



- **Avoid environmentally sensitive areas:**
 - Wetlands
 - Habitat for rare animals and plants
 - Drinking water well fields, reservoirs, surface waters
 - Over a Sole Source Aquifer
 - Sensitive populations nearby, e.g., schools, hospitals, nursing homes, churches, etc.



SITE SELECTION: BENEFITS OF RECYCLING



- Conserves natural resources
- Conserves landfill space
- Can reduce overall response costs
 - Many recyclables have \$\$ value
 - Elimination of portion of disposal costs
 - Reduction in transportation costs
- Recycling is good for public relations

Figure 5. Debris Management Hierarchy





SITE SELECTION: PLAN FOR RECYCLING ACTIVITIES



- **Develop recycling plan before disaster:**
 - Locate market/users
 - Establish process for reducing/hauling
 - Finalize stand-by contracts
- **Plan management site to accommodate recycling activities**



PERMITS FOR DMS



- **Construction Storm Water General Permit OHC 000005 (Ohio EPA, Division of Surface Water)**
- **Air pollution permits for:**
 - trench burners/air curtain destructors
 - brush chippers and tub grinders
 - concrete crushing and sizing equipment
 - diesel generators
 - roadway dust control.
- **Local authorizations (if needed)**

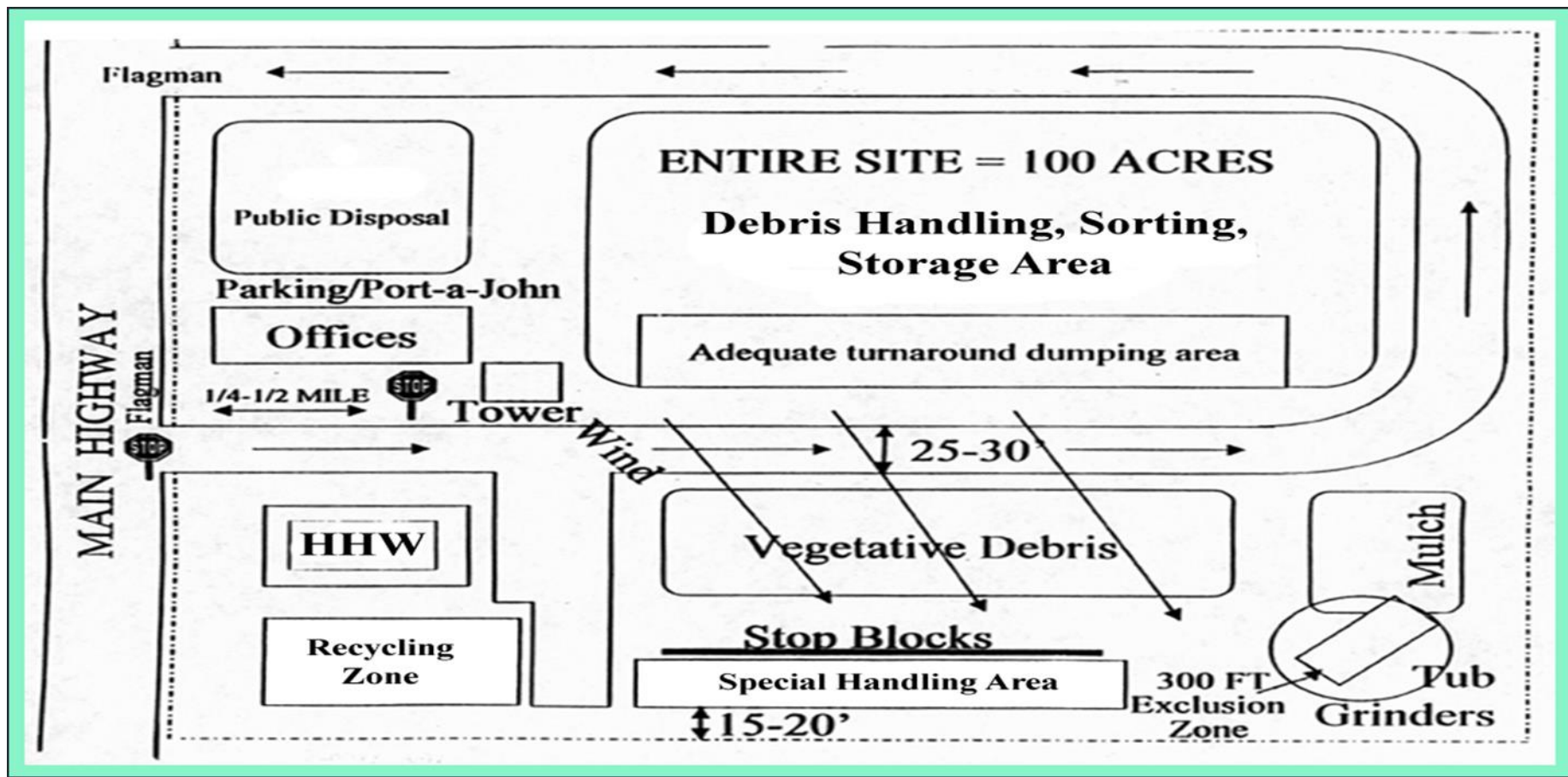


SITE EVALUATION: BASELINE ENVIRONMENTAL STUDY

- Document pre-use site conditions
- Determine if conditions preclude use
 - Environmentally sensitive (ESA, wetlands...)
 - Historically or culturally significant finds
- Establishes condition to which site must be returned after use
- Helps with legal liability



DEBRIS MANAGEMENT SITE: DESIGN



Proper Site Layout



DEBRIS MANAGEMENT SITE: OPERATIONS



- Establish and maintain buffer zones
- Construct containment berms
- Ensure segregation of materials based on volume reduction methods
- Develop holding areas for ash, household hazardous waste, and fuels
- Develop efficient process of keeping debris moving
- Provide suitable monitoring stations



DEBRIS MANAGEMENT SITE: ENVIRONMENTAL MONITORING



Monitor site for environmental compliance

- Air pollution, solid waste, hazardous waste, surface water, etc.
- Clean spilled fuels & hydraulic fluids immediately
- Document activities in photos, notes, video
- Maintain up-to-date maps & sketches
- Document any changes, sampling events, problems, oversight monitoring visits



DEBRIS MANAGEMENT SITE: SITE CLEANUP & CLOSURE



- **Ensure operations are complete**
- **Remove all debris from site**
- **Conduct environmental sampling**
- **Restore site to baseline state**
- **Obtain written concurrence of site owner that restoration is complete**
- **Formally terminate site lease**



DEBRIS MANAGEMENT SITE EXAMPLE



- Trotwood, Montgomery County, Ohio
- May 2019 Tornado
- City owned property
- Monitored site





DEBRIS MANAGEMENT SITE EXAMPLE



- Village of Manchester, Adams County, Ohio
- March 1997 Flood
- Storage area for debris
- Public property; monitored site





DEBRIS MANAGEMENT SITE: VERY POOR EXAMPLE



Improper Site Layout





DMS: HHW COLLECTION STATION





GRINDING AND CHIPPING EQUIPMENT



Tub Grinder



LESSONS LEARNED – DAYTON TORNADOES 2019



- **DMS site selection – done on the fly**
- **DMS site security - varied**
- **Mixed debris sites vs woody debris only**
- **Available grinding capacity & outlets for woody debris**
- **Asbestos assessments for damaged structures**
- **Estimates of debris volumes and types**
- **Third party DMS monitors**



QUESTIONS?





RESOURCE INVENTORY/NEEDS ASSESSMENT



Compare existing resources to anticipated needs and address any shortfalls

- **Force account labor/temporary labor**
- **Force account equipment**
- **Mutual aid**
- **Volunteers**
- **Contracted services**
- **Recycling/disposal capacity**
- **Subject matter experts/technical advisors**
- **Local and regional resources**



RESOURCES: TYPES OF OHIO LANDFILLS



- **Municipal Solid Waste (MSW) = 38**
- **Construction and Demolition Debris (C&DD) = 44**
- **Hazardous Waste (HW) = 1**

- **MSW Transfer Facilities (truck to truck transfer, not disposal) = 63**

All have restrictions on what types of waste and the total daily amount of waste they can accept.



OHIO EPA FACILITY LISTS/MAPS



Online lists of licensed landfills, landfills accepting asbestos, recyclers, composting facilities, etc.

<https://epa.ohio.gov/dmwm/Home/NonHW-Facility-List>

[https://epa.ohio.gov/Portals/27/atu/asbestos/2019 DAPC Permitted Asbestos Landfills.pdf](https://epa.ohio.gov/Portals/27/atu/asbestos/2019_DAPC Permitted Asbestos Landfills.pdf)

Interactive maps of relevant facilities

<https://epa.ohio.gov/dmwm/Home/GISmaps>

OEMA/Ohio EPA/ODPS “Debris Fact Sheet for Local Officials”

**Ohio EPA, Division of Materials and Waste Management
614-644-2621**



LOCAL WASTE COMPANY RESOURCES



Separating Household Trash and Recycling from Storm Debris

Per FEMA directions, please separate storm debris into the categories below and place at the curb away from your regular household trash and recycling. Waste Management will pick up your trash, recycling, containerized yard waste and non-storm-related bulk items. Other contractors will remove storm debris.



Storm debris should be placed at the curb without blocking the roadway or storm drains. Be sure not to place debris near trees, poles, fire hydrants or other structures.



Storm Vegetation
Leaves, (do not put in bags), logs, plants, bushes, brush, and tree branches



Construction and Demolition Debris
Building materials, carpet, drywall, furniture, lumber, mattresses, and plumbing



Appliances and White Goods
Refrigerators, freezers, air conditioners, heat pumps, stoves, washers, dryers, and water heaters
NOTE: Collection responsibility of bulk items varies by community



Household trash and recycling

Waste Management will collect your regular household trash and recycling, containerized yard waste and non-storm-related bulk items
NOTE: Collection responsibility of bulk items varies by community



For up-to-date information from Waste Management, visit www.wm.com/alerts

THINK GREEN!

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